RETRIEVING A LONG CLIMATE HISTORY FROM THE GULIYA ICE CAP

A joint U.S. – China field expedition of ~60 participants from 5 countries recovered 5 ice cores, 4 to bedrock, from the Guliya ice cap in northwestern Tibet. Cores were recovered from a large plateau at ~20,400 ft. and the summit at ~22,000 ft. This ice cap is expected to contain ice older than 500,000 years and thereby provide the longest ice core-derived climate history recovered outside the Polar Regions. The project is jointly funded by the U.S. National Science Foundation and the Chinese National Academy of Sciences (CAS) and is a major project of the CAS Third Pole Environment Program which just opened its first satellite office in the Western Hemisphere at Ohio State's BPCRC.

The Byrd Polar and Climate Research Center (BPCRC) is internationally recognized as a premier polar and alpine research center with a rapidly expanding focus on global climate change and environmental issues. This excellence stems from the innovation, dedication and commitment of its scientists, staff and students and strong connections to relevant academic departments.

The Center is named in honor of Admiral Richard E. Byrd, America's most famous polar explorer.

The Byrd Polar and Climate Research Center houses one of the most impressive "libraries" of Earth's climate history and the third largest archive of prehistoric ice core samples in the world.

Leading the way in understanding Earth's climate systems
BPCRC EDUCATIONAL OUTREACH PROGRAM MISSION

To enhance understanding and appreciation of the Earth sciences for learners of all ages, initiatives include:

• Sharing knowledge gained by BPCRC researchers with the community through facility tours, speaking engagements, public programs, and online content.

• Creating novel ways for individuals to engage with scientific information in both formal and informal learning environments.

• Collaborating with the State Climate Office of Ohio to collect and disseminate long-term climatological data and educate the public about climate change impacts.

• Developing partnerships with community organizations, local governments, state and federal agencies, and private businesses.

BPCRC FACILITIES

ARCHIVAL PROGRAM
CHEMICAL ANALYSIS FACILITIES
CLEAN ROOM
COLD STORAGE (ICE CORE) FACILITY AND LABS
GOLDFTHWAIT POLAR LIBRARY
GRAPHICS STUDIO
LEARNING CENTER
LIBRARY
MACHINE SHOP
METEOROLOGY LABORATORY
REMOTE SENSING LABORATORY
SEDIMENTATION LABORATORY
SERVER AND NETWORKING ROOM
U.S. POLAR ROCK REPOSITORY

FACULTY EXCELLENCE

DAVID BROMWICH, senior research scientist and atmospheric scientist, leads efforts to understand the weather, climate, and climate change in both Polar Regions as key components of the Earth’s climate system using observations and advanced numerical models.

LONNIE THOMPSON, professor of Earth Sciences and glaciologist, has led over 65 expeditions to ice caps and glaciers on five continents, retrieving ice cores that contain a diary of past climate conditions around the globe for tens of thousands of years.

BRYAN MARK, professor of geography and climatologist, leads interdisciplinary geographic research that traces glacier and hydroclimatic changes to better understand the processes and impacts of climate change on different time scales in mountains and other sensitive regions around the world.

IAN HOWAT, associate professor of Earth Sciences and glaciologist, leads efforts to map rapid changes in the Arctic and Antarctic to improve our understanding of how ice sheets that are major contributors to sea level rise are likely to respond to future climate changes.

ELLEN MOSLEY-THOMPSON, professor of geography and atmospheric scientist, extracts high resolution ice core records whose chemical and physical properties reveal past climate variability and teleconnections between the Polar Regions and the Tropics.